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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/802,850      | 03/18/2004  | Kiichi Yamashita     | 501.41072CX1        | 5864             |

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EXAMINER

VO, NGUYEN THANH

ART UNIT PAPER NUMBER

2618

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/802,850 | <b>Applicant(s)</b><br>YAMASHITA, KIICHI |  |
|                              | <b>Examiner</b><br>Nguyen T. Vo      | <b>Art Unit</b><br>2618                  |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Claim Objections*

1. Claim 19 is objected to because of the following informalities: the recitation "said bias circuits" at line 6 should be changed to --said bias circuit--. Appropriate correction is required.

### *Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-20 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,731,171.

Although the conflicting claims are not identical, they are not patentably distinct from each other because using the power amplifier module as in claims 1-15 of the U.S.

Patent No. 6,731,171 in a conventional mobile telecommunication apparatus (such as a

cellular telephone) having an antenna, a receiving front end, a baseband-signal processing circuit would have been obvious to one of ordinary skill in the art at the time of the invention was made, in order to obtain a cellular telephone which keeps high linearity under environmental changes such as changes of ambient temperature and control voltage.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 5, 7-8, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama (6,329,879, cited by examiner) in view of McCalpin (5,710,519, cited by examiner).

As to claim 1, Maruyama discloses in figure 9 a mobile telecommunication apparatus comprising an antenna 55; a receiving front end 51 coupled at an input end to said antenna; a baseband-signal processing circuit 62 coupled to an output end of said receiving front end; and a power amplifier module 1 (see also figure 1) coupled at an output end to said antenna and coupled at an input end to said baseband-signal processing circuit, wherein said power amplifier module comprises a bias circuit to produce an idling current (see column 4 lines 11-16; column 4 line 66 to column 5 line 2; the bias circuit in figures 1-2, 24); and a power amplifier 1 of which gain is controlled by said idling current produced by said bias circuit (see column 4 lines 11-16; column 4 line

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66 to column 5 line 2; the bias circuit in figures 1-2, 24). Maruyama thus discloses all the claimed limitations except that effects of changes of control voltage and ambient temperature of said power amplifier module can be removed by a first detector in said bias circuit to detect changes of the control voltage and a second detector in said bias circuit to detect changes of the ambient temperature, as recited in the claim. McCalpin discloses effects of changes of control voltage and ambient temperature of a power amplifier module 10 can be removed by a first detector in a bias circuit 40 (see figure 1) to detect changes of the control voltage (see column 7 line 55 to column 8 line 14), and a second detector in said bias circuit to detect changes of the ambient temperature (see column 5 line 49 to column 6 line 20). See also column 7 lines 45-54. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of McCalpin to Maruyama, in order to correctly adjust the bias current based on the changes of ambient temperature and control voltage (as suggested by McCalpin at column 1 lines 54-64, and column 4 lines 23-39).

As to claims 3, 10, Maruyama discloses in figure 1 a first matching circuit 10 and a second matching circuit 12 as claimed.

As to claim 5, see figures 3-4 of Maruyama.

As to claims 7-8, the rejection to claim 1 over Maruyama in view of McCalpin as set forth above is herein incorporated. In addition, it is noted that both Maruyama and McCalpin do not use Schottky diodes as required in the claim.

***Allowable Subject Matter***

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6. Claims 2, 4, 6, 9, 11-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claims 2, 9, 20, the applied references fail to disclose or render obvious the structures of the bias circuit as specified in the claim.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lopez (6,937,102); Birth (5,509,011); Lin (6,657,499); Kuiri (US 2003/0153287) disclose bias circuits for power amplifiers.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen T. Vo whose telephone number is (571) 272-7901. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571)272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nguyen Vo

*Nguyen Vo*  
5-22-2006

**NGUYEN T. VO**  
**PRIMARY EXAMINER**